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POSITION OF THE FETUS IN UTERO.

Read before the Obstetrical Society of Boston Feb. 12th, 1870, by B. E. COTTING, M.D.

THE presentation of the child's head at the uterine outlet at the time of birth, with the occiput towards the mother's pubes, is so common that from the earliest times it has been denominated the Normal Presentation. This appellation is so reasonable that, could its propriety be doubted, the constancy of the presentation, the shape of the child's head, and, furthermore, the form of the female pelvis as seen *post mortem* from above downwards, before the muscles and other soft parts are removed, must together, if not singly, compel at once the assent of even the most hesitating.

It has also been admitted, for the most part, that the head rests over the uterine orifice during the latter portion of pregnancy, as well as immediately preceding delivery.

Thus much is generally conceded; but, strange as it would appear, were we not accustomed to it, most writers, ancient and modern, would fain have us believe that in its earlier life the fetus has a different position; that is to say, in the same general direction as that of the mother, with its spine to its mother's spine, with its head upwards and facing forwards, or, as one has it, "placed as if looking through a little window in front." The assumption that it has this position, or would take it from the start but for reasons which they adduce, is to be found, avowed or implied, with almost all writers, from Hippocrates down to the last journalizers; and they have greatly puzzled themselves and their readers with learned attempts to account for the supposed reversal that must occur to bring it into the admitted normal position in which it is found at the later period.

We learn from the books that in Hippocratic times the fetus was thought to be retained in the upright position by ligaments,

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which broke, at or about the seventh month, to allow the child by its own force to rotate, and betake itself to the normal presentation for delivery—the twists in the cord being instanced as proofs of exertions to effect this object. Children born before the eighth month feet-first were, according to this supposition, so born because of insufficient strength to accomplish the rotation.

Another leading hypothesis, said to have originated with Aristotle, and which has been advocated repeatedly from time to time since his day, was that of gravitation so called. By it the rotation was supposed to be brought about, sooner or later, by the greater proportionate weight of the head, or of the head and parts above the umbilicus—the fetus being suspended, pendulum like, by the cord.

Subsequently, according to authorities, came the doctrine that the rotation was due to the agency of the uterus; then, again, to a combination of fetal and uterine action; and, again also, to volition on the part of the fetus, seeking the head presentation as the easiest to be born in.

Such were the opinions and hypotheses of past ages, variously modified by different writers; and such under various phases are those which have been entertained in modern times down to the present day; some of the reasons assigned for the head's seeking the uterine outlet then and now being equally absurd, for instance, then for want of food, now for want of space and air!* In nearly all, then and now, unless the whole argumentation is without a purpose, the great effort has been to show how from a position thus taken for granted, or supposed to be occupied from the start, and one which theoretically it ought to continue in, the fetus gets turned head downward at the appointed time for delivery. This effort is as apparent in the fanciful speculations of Simpson, now sustained in some quarters by a temporary popularity, as in

* "M. Drellencourt dit c'est l'abondance du meconium qui devient âcre, et qui excite dans le fœtus des tranchées et des accès de colique . . . rompant par ces efforts les tuniques qui l'enveloppent." &c.

VIARDEL, Paris, 1748.
[WHOLE No. 2201]

the grosser theories of Arantius or Levret, whose doctrine of the *culbute*, or somersnet, had a much wider influence in its day, and still finds adherents amongst the vulgar, and possibly even in the profession. Indeed, it was the accidental disclosure of some such views where least of all expected that led to this present paper.

With regard to all these doctrines, it is sufficient to say that they are all gratuitous hypotheses resting upon the merest suppositions, as is evident from the fact that no sooner is one of them enunciated by its author than its absurdity is exposed by rival theorists.

Thus, for example, Dubois shows up the fallacy of the doctrine of weight or gravitation; but, adopting the exploded theory of instinctive and voluntary determinations, is himself in turn showed up by Duncan and many others. Thus Duncan, taking the centre of gravity to be in the superior portion of the trunk (to vary a little the old notion) is refuted by nearly the same old arguments which upset the original of Aristotle. Thus Cazeaux, according to whom Dubois is more skillful in destroying than in building up, and according to whom "Delaunoy, Smellie, and more especially Baudelocque, completely subverted" the *culbute*; thus Cazeaux, like the rest, "hazards" his favorite hypothesis by which the fetus is caught in the various changes of form in itself and in the uterus, and "forcibly retained"; acquiring "mechanically a position which will bring its largest parts in correspondence with the most spacious portions of the organ." Thus, also, Simpson's theory that uterine shape and pressure produce, through the excito-motor system, reflex-motions in the fetus, till by them it gets into an easy, that is to say, the normal, position for presentation, is crushed out by Duncan, who shows that in Simpson's assumptions "there is a very great error in reasoning and probably also in physiology," and until further proof be given, "all the author's conclusions remain without any basis whatever." And, finally, Seanzoni refutes everybody else, and himself also, in a score or more of learned reasons to be found in the various medical journals of the day.

But enough for hypotheses which may be left, now as of old, to prey upon and consume each other. They are all mere assumptions to account for what seldom or never happens; and bring to mind an incident which may not inappropriately serve to illustrate the kind of reasoning common to them all.

"That's a wonderful cat," said a domestic one day—"he looks up into the tree where the bird is, and, whatever it is that he does, the bird falls at his feet!"

"Did you ever see a bird fall in that way?"

"Indeed, sir, I've seen the bird in his mouth!"

Thus reason such theorists. The normal presentation is of the head; that is certain, and in the mouth. But to get the head over and above the uterine outlet requires a magic power, a *culbute*, or "whatever it is that it does" in that way. Such speculations hardly bear for any time the test of common-sense, are injurious to science, and ought to be avoided. Indeed, of late some writers, not satisfied with any one of them singly, seem inclined to lump a number together, and to declare, like Hodge, that the position, "with the head pendant, is determined not by one cause only, but by the conjoint influence of several;" or, if less credulous, to acknowledge, like Bedford, who in his last edition two years ago repeats the following admission:—"I should say in lieu of any one of these influences being *per se* sufficient to explain the position of the fetus in the womb, the fact is due to a combination of circumstances not yet, perhaps, properly comprehended."

In a rational view, the position of the fetus in utero, from its embryonic start to its expulsion, is simply a proposition in Natural History, and should be treated as such. Hence, in a word, it is to be settled, if settled at all, by the facts in the case, demonstrated by anatomical examinations and other careful observations.

As it is generally conceded that after the seventh month of gestation the head is pendant or over the os uteri, the question resolves itself into one of fact as regards the position antecedent to that time. To the period before the seventh month, therefore, the following remarks will be chiefly confined.

Although anatomists, as well as others, have been too much occupied with prevailing theories, some have from time to time recorded, too meagerly it is true, the results of their observations on the point in question. Among those most frequently named are Vesalius, Paré, Fabricius, Smellie, Hunter, Baudelocque, Velpeau, &c. Vesalius, or rather his pupils, find the head pendant most frequently; Paré is less positive; Fabricius admits this position; Smellie gives plates from nature which confirm

it; Hunter also gives plates, in a majority of which the head is over the os. Baudeloque says that "the opening of the body, at whatever term of pregnancy, has shown many times (*mille fois*) that the head almost always occupies the inferior part of the uterus;" and Velpeau gives five cases of his own dissections, from the fourth to fifth months of gestation, in four of which the head was towards the os uteri.

In the limited time we have had for this paper we have found (as in White one at sixth month) other cases scattered singly here and there, actually examined by their reporters—all confirming the general fact so distinctly stated by Baudeloque. Smellie, it is true, alludes to "some authors, who allege that in opening women who have died in the fifth, sixth, and seventh month, they have found the child's head towards the fundus uteri," but he does not name them; and even if they are right, this is not more than is sometimes found at full term in abnormal cases. But Smellie himself, reviewing the whole matter, comes to the conclusion that "it seems to be the most reasonable opinion that the head is downward all the time of gestation."

We may therefore conclude, with due allowance for such exceptions as accompany every law in nature, that, so far as actual dissections have shown, the fœtus from conception to delivery continues in one position, and that the head as a rule is towards the uterine outlet and maintained there throughout pregnancy.

Baudeloque states also that the head most frequently presents in premature deliveries; Smellie asserts that "when women miscarry in the fourth, fifth, sixth, and seventh months, the head for the most part presents itself, and is first delivered; Velpeau says that head presentations are nearly as frequent in abortions as at full time, being in his own experience twenty-one in twenty-five cases; and so, many others. These statements have been confirmed also by prominent practitioners whom I have personally consulted on the subject. Our late lamented associate, who had so large a practice (eight thousand cases in forty years in private practice only), told me that, in his experience, head presentations were about as frequent in premature deliveries as in those at full term. I myself have been at the bedside and noticed a fœtus of less than two inches in length pass the vulva with the head presenting—a trifle, but valuable so far as it goes. It was a case of self-induced abortion. I have observed the same presentation at more ad-

vanced periods in similar circumstances. I have also examined ova, whose direction of exit had been carefully noted, and found the embryo in the same general position as at full term. And so have many others.* The assertion of Simpson that "prematurity of labor is a cause of the malpresentation of the fœtus," and of Duncan that the "death of the fœtus in utero is a frequent cause of malpresentation," are assumptions disproved by the very arguments brought to their support. It would be much more rational to attribute such presentations and such deaths to original malposition, in itself abnormal, which must always give rise to inconveniences, and sometimes to disturbances sufficient to interrupt life and cause abortion. An effect like this we have recently noticed, in a case of a fœtus of about five months which was completely doubled upon itself, the middle of the back presenting. This position caused great disturbance in the uterus, discomfort to the mother, death of the fœtus, and premature delivery.

According to Velpeau and others who have practised ballottement at very early periods, the head is almost always found presenting as soon as any part can be made out by this procedure.

On auscultation also, the intensity of the fetal pulsations is to be noticed, from the first, in the lower half of the mother's abdomen, a little to one side of the median line, this portion being occupied by the spine and thicker parts of the back of the fœtus.

Thus, without going further, although the further we go the stronger the evidence, *post-mortem* examinations disclose the head at or towards the uterine outlet at all stages of development; the ovum, so far as yet possible to make out, shows the same general position of the embryo; premature deliveries give normal presentations most frequently, if not as frequently as complete gestation; ballottement discovers the head pendant; and auscultation the occupation of the median anterior portion of the uterus by the spine and back of the fœtus. Thus we have these, and other similar demonstrations, not suppositions, all determining the general fact that from conception to full term the fœtus lies, or tends to lie, in its mother in a position completely the reverse

* Duncan quotes Hohl as follows:—"We have examined a series of unopened ova, and have always observed that the embryo reposing in the liquor amnii lies with the head lowest. We have in a considerable number of autopsies of pregnant women, not advanced to the seventh month, never once seen the breech lying lowest, if the corpse had not been disturbed."

of that of the parent; and also, so far as has been noticed and recorded, that, from the beginning, as certainly at later periods, its face is turned opposite to its mother's face, feet opposite to feet, back opposite to back, abdomen opposite to abdomen, &c. &c.—with a tendency, perhaps, to be cast off prematurely if exceptionally in any other position.

Moreover, we find the same to be true of animals having a horizontal carriage of body, where of course the weight of the head, or shoulders, cannot have the effect ascribed to it in the human race, and where also the culbute, instinct, reflex-action, &c., would have rather "up-hill work." "At all periods of gestation in animals," says Aristotle according to Velpeau, "the young have the head presentation." In animals "the embryo," says Todd's Cyclopædia, "has a somewhat similar position in the uterus as it has in the human subject." "The head is mostly turned towards the os uteri." These statements from the earliest and the latest records accord with the observations of anatomists and other practical observers, past and living, so far as we can ascertain. They relate to facts having a broader significance and a wider purport than that embraced in the narrow hypotheses of the theorists, ancient or modern.

As to the multiparous, the fœtus nearest the outlet presents normally—as we ourselves have seen—while the rest are arranged so as to follow in the same way.

And still further, the same rule holds good with the oviparous. As we have it from the highest living authorities, the egg, from its earliest development to its expulsion, always keeps the one end—the head end as we may call it, the larger end when so shaped—in the same direction, and this, too, whether fecundated or not; while the contained chick is always maintained in the one and same position, with relation to the axes of the egg, even before it has taken sufficient form to be cognizable by the naked eye. The mere mention of gravitation, voluntary or instinctive motion, and especially of reflex action, in such connection, is sufficient to show the absurdity of these fancies, and of argumentation dependent upon them. What, forsooth, has gravity to do with the presentation of spherical bodies, as many eggs are even at term; how can voluntary motion exist before there is a fœtus; what chance is there for reflex action in an unimpregnated ovum covered with a calcareous shell?

Thus we see, on a comprehensive view, however cursory, of the realities and mat-

ter-of-fact workings of nature, that the speculations of theorists, however ingenious and captivating, have no solid foundations to rest upon. The theories of "instinctive or voluntary motion," and of "reflex action," are misty fancies, explaining nothing, while befogging and bewildering the practical searcher into the secrets of nature; and "gravity," if it ever have anything to do with vital development, can be only occasional and temporary—even as gravity itself, for aught we know to the contrary, may possibly be but an exceptional influence in the grand evolutions of systems making up the totality of the universe.

We all may admire the wonderful adaptations of these arrangements, and acknowledge the wisdom thus displayed in the present conditions of animal existence, but we cannot explain why the present plan was adopted in preference to others, any more than we can explain the origin of life, say why the earth turns west east, or show cause why a tree spreads its branches like an oak or droops them like a willow.

It has been said in reference to a kindred matter, that "it appears wonderful that so many physiological absurdities should have been so easily adopted by the profession"; but an unwillingness to accept a common fact or law unless accompanied by a marvellous interpretation, seems to be a universal infirmity, common alike to the learned and the low. *Credo quia absurdum est* belongs to no one class exclusively as a frequent foundation of belief. A bird in the mouth by ordinary seizure is nothing unless ascribed to a previous charming by the captor. A marvellous interposition of gravitation, a culbute, instinct, or reflex-action—assumed to account for a reversal, never yet proved, of a hypothetic position; a reversal if not impossible, in the very highest degree improbable—seems more acceptable than a simple statement of observed facts, reasonable in itself and involving no interruption or irregularity. Moreover, exceptional cases are apt to receive more attention than is due to them; and too frequently they are made the basis of theory and argumentation—even to the overlaying of the rule itself. Nevertheless we are confident that we have been expounding, though very imperfectly, a LAW OF NATURE, which, as such, will be found the more firmly established the more it is examined and studied; and which, some time or other, will be fully acknowledged as a *Part of the Plan of Creation*.

FEEDING CHILDREN.

BY A RETIRED GALACTANERE.

Do you always manage to get one cow's milk? Do you always succeed in finding a wet nurse? Is Liebig's food a good thing, or is it Big-lie's food? What do you think of groats, and barley, and whey? I always put the children on one or the other, in spite of the doctor. What does *he* know about babies? My baby began to eat baked beans before it had teeth. Mine always goes to the table, and if you could only see it crowd in the potato and cranberry sauce!

Well, the tough ones live. Sometimes they grow up tough, and then again they don't. So I have thought, when I have listened to statements and questions as above. Now, my dear sir, since you have asked my opinion about the one-cow's milk, and since I have retired from the trade and it can't hurt me; and considering that everyone's *own* milk man is *the* honest one (just as in your business every one's *own* doctor is the best), I'll give you a specimen of how we used to do it, when milk was five cents a quart.

We used to call it morning's milk. That was because we left it for customers in the morning, and part of it was milked in the morning—of the day before. I started for the city, in summer, at about two o'clock. After my man had got up and milked our two cows, and had eaten his breakfast, he harnessed up the other horse and wagon, and drove round for the milk, which was to be fresh to-morrow morning. Mr. A. let us have a gallon or two; Mr. B. a quart or two. Mrs. X. didn't make butter that year, and Mrs. Y. had stopped cheese making, and they had four or five gallons apiece. So on through the town. He picked up a pretty lot in all, and every week I paid for it—nine cents a gallon. This was by the beer measure, so called, and each gallon held two hundred and eighty-two cubic inches. We sold it for five cents a quart. This was by wine measure, and each gallon held two hundred and thirty-one cubic inches. We must live, you know.

The man got home at about the same time that I did. We scalded out the cans I had brought home, and put the others in a cool place for to-morrow. There they stood till evening, some ten or eleven hours, when, as I had certain customers who were willing to pay twenty cents a quart for cream, and a man must live, we ponred off about two quarts from the top of each can. Well, that's cream.

But there are meddlesome fellows, females most of them, who would say your cans have too much room in them, and the milk shakes about and it gets spoiled. A couple of quarts of water to take the place of the cream rectifies that. But some other meddlesome fellow may put a lactometer in it and find it don't weigh enough. Oh, a little common salt fixes that. But the color is too blue. We may be accused of selling skim-milk. True, I forgot that. Molasses brings back the color, gives it richness in look, and, with the salt, its flavor is all right.

I was one of the honest milkmen, and if there was a little cheating, a man must live, you know. Faxon never heard of any one's suspecting me; if he did, he never could prove anything, and never told me anything about it.

I knew one doctor whose boy was brought up on one cow's milk at an extra price. That of course, for it is very hard to keep milk from mixing. The doctor bought his own cans, and the boy grew astonishingly well, and the milk man got two cents extra on the quart for *that* milk. Once or twice the doctor watched, and saw the dealer mix the milk, round the corner. He afterwards found out that all of this man's supply came from the Westboro' Milk Company. But then a man must live, and wasn't the milkman a church member?

Moral.—Don't ask too many questions, and don't employ a milkman who makes loud professions of piety.

HYDRATE OF CHLORAL IN CHOREA HYSTERICA.

By Dr. A. BRIERS, of the General Hospital in Vienna.
Translated from the *Wiener Medizinische Presse*, by
D. F. LINCOLN, M.D.

In spite of the numerous experiments which have been made with this new remedy, it is certain that we are not yet in full possession of the evidence requisite to a final verdict upon its merits. No doubt, the future will settle for us the exact indications for its use, as the past has done in the case of so many other well-known remedies. Drasche believes that as an anæsthetic it will scarcely attain the importance of chloroform; and Benedikt warns us against giving large doses in affections of the brain, lest congestion and cerebral hæmorrhage may (possibly) result from its action. Liebreich considers that its range does not require so much limitation. He gives it even to small children, when cerebral congestion excludes

the use of morphine; employs it during minor operations upon the extremities, and in ophthalmic surgery, and considers that there is no objection to extending its use to severe operations, in case a suspension of the narcosis be not absolutely required. According to Bouchut, it must not be given to persons who have a cerebral or a cardiac disease. Many make a more extended use of it, especially in mental diseases, and with good results. Levinstein found it of the greatest benefit in cases of extraordinary dyspnoea dependent upon disease of the heart and lungs. He names, as the only circumstances prohibitory of its use, gastric disturbances, and ulcerations of the fauces, oesophagus, stomach, posterior wall of the larynx, &c.

While the views of different observers are so contradictory, and the price of the drug is so high, it will be hard for it to find universal acceptance in practice.* But there are cases in which nothing ought to deter the physician from accepting the remedy with gladness, in the hope of securing some alleviation of the symptoms present. Such a case has lately come under our observation; and we now propose to relate it in *extenso*, in an entirely objective form, leaving inferences to our readers.

The following is the history, as chronicled by myself, conjointly with my colleague, Dr. Hlesky, the second assistant physician in this department.

On the 22d of November, 1869, the patient, M. M., aged 22, was brought into the ward on a stretcher, to which she was held down by the aid of five men and several women. Even this large escort was not able to lay her quietly in bed. She jerked her body upwards, and to both sides, with such violence that the pillows were soon in the middle of the floor, and the freshly-made bed was in the utmost possible disorder. It was necessary to apply the "girts," to keep her from throwing herself out of bed. The muscles of the face, trunk and extremities were constantly twitching; the motions of throwing, jerking, extension, flexion, pronation and supination, were not even moderated for so long as a minute at once.

The patient's health is said to have been always good. Menses commenced in the 15th year, always lasted about a week, were tolerably abundant, and were neither preceded nor accompanied by any unpleasant symptom whatever. They are said to have appeared for the last time three months

ago. Six weeks ago she married. On the wedding-day her step-mother says that she noticed the girl making some convulsive movements with her hands about her apron, while standing before the altar. She had never been observed to make such motions before. A few days previously, however, she had been very much elated in spirits at the prospect of marriage, and this fact was supposed to have some connection with the twitching of the hands. Three weeks before admission, the whole body became similarly affected to a very slight degree. During the last eleven days the motions had increased very much. A white powder, given by a so-called "bather," had only made matters worse. During these eleven days she took no nourishment except soup and water, nor did she once close her eyes in sleep, so that her husband and friends, unable to endure the fatigue of watching her, brought her at last to the hospital. The husband informed us that they had had sexual commerce for several weeks previous to marriage, but never to excess, and that he had never perceived anything remarkable in her conduct during or after the act.

After careful and continued observation we were able to analyze the patient's movements into distinct actions, as follows:—

The head is most frequently thrown backwards, sometimes to the right or left, and rarely forwards. The forehead is often wrinkled, the eyelids are sometimes opened forcibly, and sometimes quickly closed. The eyeballs roll constantly.

The pupils are uniform, rather contracted, and react well to light. *Alae nasi* very widely dilated; snuffing very frequent. The mouth is often opened to its greatest extent, and then shut so suddenly and violently that the teeth strike each other. The tongue is literally jerked out instantaneously, pointing generally to the left; then it is suddenly drawn back with a single motion. It has a whitish coat, and is moist; the lips are dry and fissured, causing the patient great discomfort. She often tries to reach them with her hands, but before accomplishing her wish she has to go through a long series of apparently aimless movements, throwing and twisting her body hither and thither, in and out. The extremities are in continuous action; the movements of various kinds cannot be followed by the eye. One foot, for instance, is thrown outwards against a board placed by her, while the other is drawn up and down, or kicks in the air. A similar, and yet more complicated play is carried on by

* Since this was written, the price has fallen to about two-fifths of the price named; and it is to be hoped that the objection on this score will soon be done away with.

the hands. The whole body suddenly assumes this extreme degree of pronation or supination, threatening to fall out of bed in spite of the strong bandages; and covers, mattresses, and everything not firmly fastened, fly about in disorder. The ordinary apparatus for confining unruly patients, and those with delirium tremens, is not sufficient; the girl's movements are so continuous and so violent that she tears the girts, and injures herself by rubbing against the rougher portions. A sheet is folded broad and laid over the legs, then passed under the bed and tied there; a second and a third are similarly applied over the chest and abdomen, while smaller pieces of cloth, fastened to the sheets, confine the hands and feet near together in the middle of the bed. Finally, every projecting bit of wood has to be padded in order to prevent severe contusions.

The patient's body is pretty well nourished; the breasts are firm, without milk; abdomen rather soft, not distended, not painful; some gurgling in the latter. Temperature slightly raised, pulse hard to count, 100-108. Respiration cannot be seen or counted. Violent sobbing at times. Consciousness not obscured. The patient sometimes makes herself understood, though with difficulty; she complains of great thirst, and when the movements are violent she asks to be bound faster. When she attempts to execute any voluntary motion, the greatest variety of counter-motions first come into play, and finally the purposed movement is quickly and hastily accomplished. The urine is passed in bed. Pressure upon the vertebral column calls forth no expression of pain. Nothing solid can be swallowed, and even water has to be carefully introduced by means of a rubber teat. Swallowing is difficult; and when a little too much water is introduced at once, she chokes badly before she can force it down.

At 4½, P.M., about half a grain of acetate of morphine was injected. In fifteen minutes she slept; but awoke in about half an hour, and the movements became much more violent than before. At 9, P.M., a second injection was made, with the same quantity of morphine, which was followed by an unquiet sleep of nearly an hour; and on awaking, the restlessness again became so great that the patients were kept awake and in a state of great excitement all night. As the patient could obtain no rest, and was constantly losing strength, being unable to swallow scarcely anything but water; as the excoriations were continually in-

creasing, and threatened to suppurate and thereby to expose her to the danger of pyæmia; as the patients in the ward were all unable to sleep, and besieged us with complaints, while many of them experienced various convulsive contractions, and one woman who had had epilepsy four years previously was in dread of a fresh attack: for these reasons we decided without delay to have recourse to the hydrate of chloral, hoping at least for some calming effect, and on the 23d of November, at 10, A.M., we gave her one-half of the following:—

R. Chloral. hydratis, drachmam unam.

Syr. simpli. aq. dest., aa. unc. semis.

Care was taken that none was spilled in swallowing. In *three minutes*, the movements were less violent. In *eight minutes there was perfect quiet*. The head was somewhat inclined backwards, the eyes and mouth were half open, the face rather cyanotic, the respiration deep, regular, 18 or 20 in the minute, the pulse, felt in the radialis and seen in the carotis, 92, the temperature somewhat elevated, the skin moderately damp, the sensibility normal.

In ten minutes, a slight twitching of the extremities occurred, owing to the noise made by a stick of wood falling in the kitchen; then again perfect quiet. After twenty minutes, respiration 18, pulse 88. In thirty minutes, twitchings during two seconds, while another patient was coughing violently; the tongue was thrust out, the head slightly moved, and then sleep returned, the eyelids being more nearly closed. In thirty-five minutes she awoke, and began to be restless, with slight intervals of quiet; and presently the jactitation was general and most violent, while the urine was passed in bed. After quarter of an hour, the restlessness continuing, one-half of the remainder of the medicine, or about 15 grains, was given in small portions at a time. In four minutes sleep followed, which lasted uninterrupted for half an hour; then slight twitchings during five minutes, sleep for ten minutes, violent jactations for five minutes, sleep for ten minutes, severe twitchings for an hour, and then sleep for three-quarters of an hour. Upon waking, the restlessness was very great, and the remainder of the chloral (15 gr.) was given. During ten minutes the patient called frequently for water; and then slept. Temp. raised considerably, resp. 18, pulse 80. The bleeding excoriations on the back and limbs were washed and dressed. In thirty-five minutes, a few seconds of slight twitching; then ten minutes of calm sleep,

then some twitchings, fifteen minutes of quiet sleep, ten minutes of moderate jactation, an hour of sleep with few interruptions, and finally very violent twitchings and movements, and loud, inarticulate crying. At 5, P.M., another half-drachm was given, and during the remainder of the time until the next morning the patient alternated between quiet sleep and moderate convulsive disturbances, sleeping, however, the greater part of the time. Drank four tumblers of water during the night. Pulse 72, resp. 12.

Nov. 24th.—Frequent and urgent requests for water. Great unrest, with little sleep. At 9½ half-a-drachm of chloral was given at once. Sleep followed in four minutes, which lasted with very brief interruptions three or four hours. In the afternoon, almost three-quarters of an hour of nearly perfect quiet, while the patient was awake. She spoke quite intelligibly and connectedly. Great restlessness for fifteen minutes about 5, P.M. Ate ten plums, and drank some milk, and then rested till 7. From that time until 9½, there were several very disturbed periods. At that time she was given a third of the following:—

R. Chloral. hydratis, drachmam,
Mucil. gum. arab.,
Syr. cort. aurant., an. unc. sem.

This mixture seems to have been very repulsive to the patient, who could not be made to drink the whole dose. Slept a good deal, and had also a good deal of disturbance, during the night.

Nov. 25th.—From 10, A.M. to 4, P.M., awake, with very slight disturbance. Took milk and soup. Urine drawn with catheter. Slept very well on the night following, waking only four times, with very slight twitchings.

Nov. 26th.—The fetters are taken off. Thirst much less troublesome. Says she is hungry. Swallowing is still difficult. Speaks distinctly. No stool as yet. Urine drawn with catheter.

Nov. 27th.—The patient is quiet for the most part, and speaks some connected sentences. The twitchings are now only local. Her hand jerks when she grasps an object, but she can take the glass and drink from it. The muscles of the face sometimes twitch while the trunk and extremities are quiet.

Nov. 28th.—Status idem. Three large stools, the effect of a laxative medicine.

Dec. 1st.—The patient leaves her bed; her appetite is excellent. She speaks quite fluently, and makes very few noticeable motions, mostly with the upper extremi-

ties. The head is seldom thrown to one side or the other. Refuses a dose of ½ drachm bromide of potassium.

Dec. 4th.—Can eat solid food without any assistance, and goes about all day. Accompanied by another patient, she descends one flight of stairs and crosses several court-yards, on her way to the bath.

Dec. 5th.—Feels worse after the warm bath.

Dec. 6th.—Flor. zinc., a knife-point full, three times a day.

Dec. 9th.—Condition the same. A cold douche-bath was not agreeable to her.

No treatment since the use of chloral had appeared to be followed by any improvement, but, on the contrary, the twitchings had become worse. A scruple of hydrate of chloral was therefore given night and morning. After taking it the patient became much quieter, without going to sleep; her speech was quite clear and distinct, her head never affected; the chloral burnt her mouth somewhat, but though she disliked it she took it readily.

An examination showed that the vaginal portion of the uterus was in a virgin condition, and the whole organ very little enlarged, not at all answering to her supposition of a three months' pregnancy. Breasts firm, and without milk. Vagina not particularly hot. Fundus and os both distinctly inclined forwards (anteflexion).

Hydrate of chloral was given for three days in the above dose (℥i., morning and evening). The muscles have become very much quieter. The patient feels not the slightest bad effect from the continued use of the drug; never is put to sleep by the dose of a scruple. Appetite normal.

Dec. 14th.—A little debility remains. She had grown very lean and very pale, but is now strong again, and eats all kinds of food with a good appetite, goes about all day and makes herself useful in the ward in all kinds of ways. Takes 10 drops of tr. valerian twice a day. Peculiar movements can hardly be perceived; and on Dec. 23d, she was discharged, cured.

Dr. Norr, in an article on the treatment of endometritis by uterine injections, says that it is the only treatment in which he has any faith, that it is not attended with danger, if properly managed, and that the objection urged against the treatment arises "1st. In want of a proper instrument for injecting the body of the uterus. 2d. From articles too irritating to suit the condition of the organ."—*California Med. Gazette.*

Reports of Medical Societies.

BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.
CHARLES D. HOMANS, M.D., SECRETARY.

JAN. 24th.—*Congenital Opacity of the Cornea; progressing.* Dr. BETHUNE reported the case.

A woman, 25 years old, applied to him with this affection; it involved about one third of the cornea from the upper edge down, looking like ground glass at its upper part, while the lower edge resembled the crescent of the finger nail, being white and dense. The mother of this patient noticed at birth an opacity the size of a pin's head on the upper edge of the cornea, which has gradually increased.

Dr. Bethune considered the case of rare occurrence, he having seen but one or two instances before.

JAN. 24th.—*Treatment of Scabies.*—Dr. WHITE said the quick treatment of this disease is almost universally employed in Europe now; for this purpose Hebra uses the alkalies and sulphur mixed together, combined with oil of cade, or in the form of Vleminghx's solution. One thorough application of the latter is generally sufficient; but when used in this way causes much smarting and eczema afterwards. It is better, therefore, to use it less vigorously and on three consecutive nights. Late-ly, styrax and Peruvian balsam, which contain the same chemical principles, have been used; they are pleasant and unirritating. Recent observations show that the itch insect will live submerged in styrax two to three hours; in Peruvian balsam twenty to thirty minutes; in oil one to twelve days—as long, in fact, as in dry air. A single application of Peruvian balsam, or of styrax, four parts of the latter to one of alcohol, or olive oil, well rubbed in and left on all night, will cure the disease.

To Dr. BETHUNE, Dr. WHITE said that soft soap would cure the itch if applied efficiently and often enough, but the process was a long one and generally caused eczema.

Dr. BETHUNE said he had cured mange in a cat with soft soap.

Dr. WHITE said that the animal on the cat was different from that on man.

Dr. ELLIS said that the disagreeable odor of Vleminghx's solution would be more or less disguised by the use at the same time of oil of anise.

Dr. WHITE preferred the oil of bergamot for this purpose; but said that point might

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be decided according to the taste of the patient.

Dr. SINCLAIR had heard recently of a boy in the woods, living on rough food, who became covered with lice; he took a tallow candle, rubbed himself well with it from head to foot, put on his clothes, and had no more trouble from these insects.

Dr. WHITE said that it was doubtful if the itch insect had any true respiratory apparatus, as shown by its living so long in oil. Its burrows have to be opened to allow the parasiticide employed to come in contact with the adult female or her eggs.

FEB. 14th.—*A large Tumor from the Abdomen of a Child; with Remarks upon the Value of the Microscope in the Study of Morbid Growths.*—Dr. JACKSON showed a photograph of a child aged 3 years and 3 months, which he had recently received from Dr. Charles Goodwin, of Wakefield. There was great emaciation, but the abdomen was perfectly immense, and uniformly so. The enlargement commenced last June, and was unattended with pain or loss of appetite; and there was no vomiting until the last few days.

With the photograph Dr. J. had also received a fresh tumor that was taken from the abdomen, and that weighed fifteen pounds. It was quite defined, of a rounded form, was somewhat irregular externally, and showed prominently above the surface a considerable portion of one of the kidneys, throughout its whole length, and perfectly healthy in appearance. On incision, the mass presented different appearances in different parts, as such growths usually do. To some extent it was perfectly encephaloid, and in its literal sense, with extravasated blood scattered through it in small quantities; and it was quite moist and shining, as from an infiltration of yellowish serum. The rest was of a coarser structure, more dry, without effused blood, varying in color and consistence, but generally light, and nowhere firm—and without any further trace of encephaloid. It was also somewhat lobulated, and the different lobules varied in some parts considerably, as they lay side by side. The kidney was as healthy beneath the surface as before it was cut into; but it was soon entirely lost in the disease. Upon the external surface of the mass were several lymphatic glands perfectly healthy, as the other organs of the body were said by Dr. G. to have been.

In regard to the nature of the case, Dr. J. said that the gross appearances of the mass were such as had always been supposed to indicate "cancer," or malignant

disease; and, in the common acceptance of the term, that was what he believed it to be. It originated, he thought, in the kidney, notwithstanding the perfectly healthy condition of a portion of the organ. The absence of cancer in any other part of the body is of no great account; the law in regard to different organs being affected is generally true, but too often violated. The healthy condition of the lymphatic glands, lying as they do, directly upon the mass, was certainly very remarkable upon the above presumption. Dr. J. believed that the disease clinically was so far cancer that if situated upon a limb, amputation would not have saved the patient.

As to the microscopic appearances, they would probably vary more or less in different parts of the tumor as the gross appearances did. Until recently, it has been thought that the question of cancer or malignancy could be determined by the presence of cells of a certain character, but it is now well known that such is not the case; and some pathologists, finding that the microscope is not to be depended upon, seem half inclined to give up the use of the term "cancer."

In a scientific, or anatomical point of view, it may be, and undoubtedly is very interesting to examine a morbid growth in its elements, with the greatest minuteness; but, if the microscopist cannot tell the surgeon whether the disease for which he has amputated will or will not probably return in the stump or in some internal organ, his examination has been of no great practical account. Dr. J. believed that, with all the attention that is being given to the microscope, our knowledge of morbid growths must be, as it already has been, greatly increased; but if one depends too much upon it he will make some great mistakes, as many auscultators did formerly, when they depended upon physical signs and to the comparative neglect of symptoms.

In order to determine the nature of a morbid growth, and, during the life of the individual, its probable tendency, it is necessary in many obscure cases to get all the evidence that we can have—to study the clinical history of the case, and to examine the gross and microscopic appearances of the structure. And, if these last are both doubtful, as is not unfrequently the case, Dr. J. believed that one who is well and equally well acquainted with both, will generally form a more correct opinion in regard to the question of malignancy, so far as it is possible to form one at all, if he depends upon the gross appearances. Dr. J.

further thought that, in the present state of science, if one who was well acquainted with both appearances, should take the whole range of tumors and allied growths, however apparent or doubtful their nature might be, and undertake to decide upon the question of malignancy by an examination of their gross appearances alone or their microscopic appearances alone, he would find that, on the whole, the first were the most reliable.

Dr. COOLIDGE said that, on a careful microscopic examination, the growth was found to consist of innumerable cells in an amorphous intercellular substance, kept together by loose connective tissue. In some parts this was more abundant than in others. Where the growth had broken through the membranous envelope it contained no fibrous tissue. Innumerable cells, generally round, were lying close together in an amorphous, albuminoid, intercellular substance, which was hardened by astringents, but which while in its natural state could be rubbed into a semifluid mass by the fingers. In the harder and interior parts of the growth there were long fusiform cells coiled into bundles or stretching through the mass, and other fusiform cells. All these elements, with the connective tissue, did not seem to be arranged on any plan, but were mixed up in no definite way. There was none of the character of carcinoma, or cancer, in its limited meaning, about the growth, which was a sarcomatous development. Bloody effusions in these growths depended on their vascularization.

Dr. WARREN showed a section of the tumor prepared for the microscope. In those parts of the tumor which were near the kidney there was a structure similar to what is usually seen in carcinoma, viz.:—a well-marked alveolar stroma, enclosing masses of cells in its meshes; at other points no distinct stroma was made out, and the tumor here presented a sarcomatous appearance.

(In reply to Dr. JACKSON's remark that the tumor had so cancerous a look, that he should consider it as such, whatever the microscope might show) he said he had seen in Berlin a tumor quite as encephaloid in look as this one, and clinically malignant, metastatic deposits being found in several organs. It was supposed by Frerichs to be carcinoma, but when examined by Virchow it was found to be sarcoma.

The term carcinoma or cancer, as used by the German pathologists, is an *anatomical*, not a *clinical* one.

FEB. 28th.—*Sudden Death near the Close of Pregnancy.*—Dr. CORRINE reported the case.

Mrs. —, aged 44, short and stout; usual weight 170 to 180 pounds. Mother of six children; youngest nine years old. Again pregnant, and within ten days of full time. Had no more than the usual inconvenience attending such a state. Drove or walked out almost daily. Had some swelling of extremities, which in part subsided on leaving off garters. A little irritating cough at one time troubled her, but this had nearly abated.

After a day of noticeably good condition—having walked out, eaten a hearty dinner, and a sufficient supper, and having been up and down stairs at 9, P.M., to put the youngest child to bed—she retired at 11, P.M., and, with the exception of a slight interruption by the child a little after midnight, slept soundly until 5, A.M., (Feb. 17th).

Awaking at this hour she desired to get up, and was assisted to a chair by her husband. On arising from the bed, there was a discharge of liquid, and she thought the "waters had broken." On this account, and fearing that labor might possibly come on unexpectedly, at 6 o'clock she sent for her physician, who arrived in about a quarter of an hour. He found her sitting in her chair, fearing a tedious dry birth, but panting for breath, and with all the appearance of one sinking. Her mind was perfectly clear, as it was to the last moment. She was quite cheerful, without the least suspicion of danger, being only, as she said, "nervous" and "short breathed." She asked to have the window opened, but did not insist upon it.

Her respirations were short and imperfect—45 to 50 a minute. By auscultation, no air was heard to enter the lungs below the spines of the scapulae. Fine mucous crepitations were heard above. Pulse very rapid, feeble, and at times almost imperceptible. Countenance ashy white, with leaden hue along the lips. No motion of fœtus, or fetal sounds over abdomen. "Fœtus quite active a day or two before."

The bed was immediately prepared, and so arranged that she could take a sitting posture in it—fearing, as she said, to lie down "lest she should smother." She walked to the bedside, sat down upon it, was adjusted into a comfortable position, and warmth applied to extremities, &c. Digital examination showed no progress of labor; and the presentation was too high to be made out. The membranes did not

appear to be broken. There were no labor, or other pains from first to last, nor any appearance of suffering except from imperfect respiration.* She took a solution of carbonate of ammonia; and quite freely of brandy and water, asking for more of the latter a moment or two before she died. Respirations became shorter and shorter, and less perceptible, until at 7½, A.M., without struggle or appreciable sign, she had ceased to breathe. Immediately there flowed from the mouth and nostrils a thick, ropy, perfectly white fluid, of a pasty consistency, and completely filled with the minutest air bubbles.

Request for an autopsy not granted.

Dr. FIFIELD said that sudden death in the puerperal state had for a long time been a subject of attention by observers and writers. Among the latter, Mordret of Paris had produced a thesis crowned by the Imperial Academy of France, entitled "Concerning Sudden Death in the Puerperal State." Many cases were given in this work of sudden death occurring both at the time of and some weeks after delivery, when everything seemed to promise most favorably. Mordret attributes some of these events to the impoverished condition of the blood, which he holds to be the usual condition of that liquid at the termination of gestation, predisposing to œdema, sometimes of the lungs, and to the occurrence of syncope from the exhaustion of the nervous centres. Hence he counsels not to reduce the pregnant woman, or one newly delivered, to a low diet of gruels and teas, as is usually practised by nurses, but to allow beef-tea, soups, and even a moderate amount of stimulants; something after the old-fashioned plan of a glass of rum after delivery.

Dr. FIFIELD said that these sudden deaths often took place on assuming an erect posture of the body after sleep, such as rising from bed to pass water.

One case is given by Mordret of the death of a lady a fortnight after delivery, while standing up to comb her hair.

Dr. FIFIELD also related a case in his own practice of death taking place ten days after delivery. This person, who had been very well, and who had even been out of her chamber, rose in the night to pass urine. Returning to her bed, she asked to have her baby given to her to nurse. Before the attendant could turn to give her

* There was so little distress that the patient's husband says but for the supposition that labor might be impending, he should not have thought it necessary to send for a physician, for he did not himself see anything alarming even to the moment of death.

the child, she was dead. In this case there was no autopsy.

Dr. JACKSON had seen but a single case of the kind, ten days after confinement; the patient was walking across the room and fell dead; nothing was found at the autopsy to explain this unforeseen event.

He thought the disease in the present case might have been congestion of the lungs, though there is generally greater distress in that affection.

Dr. PARKS said some French writer he had lately read considered the death in a majority of these cases attributable to embolism.

MARCH 14th.—*Sudden Death in the Puerperal State.*—Dr. CORRING, after referring to the case of sudden death in a healthy woman, eight or ten days before expected labor, reported by him at the last meeting, said that since then he had examined the work spoken of by Dr. Fifield (*De la Mort subite dans l'Etat Puerpéral*, par le Dr. A. E. Mordret. 4to. Pp. 182. Paris. 1858).

It is a "Mémoire Couronné" on a question proposed by the Academy on cases of sudden death in the puerperal state *not explicable by ordinary and appreciable causes.*

The author, after stating that such sudden deaths occur from a speedy interruption of either circulation, respiration or innervation, maintains that even in asphyxia and syncope, the death really takes place from defective innervation. "C'est donc en dernière analyse au cerveau qu'il faut toujours rapporter la mort subite."

He further maintains that the sudden death is almost always due to a previously unobserved or unobservable affection going on in some one of the vital organs rather than to the puerperal state itself. "L'état puerpéral n'est point la cause essentielle de la mort, il en est seulement la cause occasionnelle." He says, however, that in the puerperal state there is a veritable polyhæmia, to which must be referred the plethora so common in the latter months. But this plethora, according to him, is only apparent, being of a serous nature, owing to an altered chemical composition of the blood in pregnant women; yet it may give rise to the same phenomena of congestion as plethora. Hence he considers lesions of respiration secondary rather than primitive, as dyspnoea, &c.—the result merely of nervous disturbance, though appearing to be caused by sanguineous or serous congestion.

Most of the work relates to sudden deaths during or after labor. Of the fifty-two cases cited therein, only four occurred be-

fore confinement. In one of these there had been an attack of paraplegia at the second month, and a sudden access of suffocation, at seventh month, without known cause. There was no relief, and death took place in three hours. Autopsy revealed old softening of the brain. In another case, the subject was found dead, and autopsy disclosed double and recent pleuro-pneumonia. A third case was very incomplete; by hearsay. Death, at seventh month, probably from nervous shock.

The remaining case was that of a girl set. 24. Near full term. Felt ill on leaving her chamber and returned; took water; vomited; became oppressed with great and increasing dyspnoea. Calling to an assistant, said, "I smother," and soon died, one hour and a half from the attack. There was no syncope or loss of intelligence. *Post mortem* showed nothing to account for the death; the lungs were sound. Fœtus normal. This alone of all the cases resembles in any degree that reported by Dr. Corring.

According to Dr. Mordret, in cases of sudden death before the full term, in default of organic lesion, the cause, with individual modifications, may be attributed to disturbances of the ganglions of the great abdominal sympathetic nerve—the susceptibility of the stomach in the puerperal state and the development of the abdomen being among the causes of such disturbances. "Les irritations de l'estomac reagissent très immédiatement sur le plexus solaire, le plus important des centres nerveux ganglionnaires, et les irritations qui lui sont ainsi transmises peuvent être assez fortes pour déterminer la mort subite."

Syncope, so common in the puerperal state, Dr. Mordret would attribute to a similar cause; and he considers pregnant women predisposed by their situation to a so-called gastric syncope, at times a cause of sudden death in old age, inasmuch as they are almost always slightly anæmic and thus somewhat resemble debilitated old men; all this, too, arising from sympathetic or mechanical irritation of the solar plexus.

In short, Dr. Mordret, without denying the frequency and importance of organic lesions, believes that there are other causes of sudden death in the puerperal state which are inexplicable (insaisissable). He says:—"Je crois même que, dans le plus grand nombre des cas de mort véritablement subite, une petite lésion matérielle ne suffit pas pour expliquer la mort, et qu'il faut y ajouter l'influence d'une lésion nerveuse."

In the case reported by Dr. Corring there

was accustomed good health throughout the pregnancy, and remarkably good near the last. The length of the fatal affection was not over two hours, so far as the patient or her family were aware of any disorder. Dyspnoea, from want of capacity in the crowded lungs to receive air, was the only prominent symptom. There was no primary or noticeable disturbance of the circulation. The stomach had not been susceptible, but remarkably undisturbed. There had not been at any time any show of nervous affection. The intellect was perfectly clear to the last moment of life.

Medical and Surgical Journal.

BOSTON: THURSDAY, APRIL 7, 1870.

ARTHROPATHY CONNECTED WITH PROGRESSIVE LOCOMOTOR ATAXY.

DR. MEREDITH CLYMER lays down the anatomical characters of Progressive Locomotor Ataxy as being sclerosis of the posterior columns, disintegration of the gray substance of the posterior (?) cornua, of the spinal cord; with atrophy of the posterior nerve roots, and sometimes structural change in the cranial nerves, chiefly the second, third, and sixth. (See JOURNAL of March 10th, p. 192.)

"In an article on Diseases of the Joints connected with Progressive Locomotor Ataxy, by Benjamin Ball, Professeur-Agrégé at the Paris Faculty of Medicine, occurs this passage:—

"The researches of modern histologists, and especially of Valentiner, Luys, Lockhart Clarke, and Charcot, tend to connect progressive muscular atrophy with the destruction of the nerve cells which occupy the anterior cornua of the grey substance. Should further researches enable us to establish a constant connection between these two lesions, it will then be demonstrated that the nutrient centre of the muscular system resides in a given point of the spinal axis. But that which may be proved true according to this hypothesis, as regards the muscular system, may perhaps hold good, in an equal degree, in reference to the articulations, the health of which, in a great measure, depends on the integrity of the nervous centres."—*Med. Times and Gazette.*"

(See our issue of March 17, p. 215.)

We now translate from the *Archives de Physiologie, &c.*, the following memorandum "on a Lesion of the Gray Substance

of the Spinal Marrow, observed in a case of Arthropathy connected with Progressive Locomotor Ataxy," by MM. J. M. Charcot and A. Joffroy. It appears to relate to the same case as that which formed the basis of Dr. Ball's paper, from which the preceding extract was transferred to the London *Medical Times and Gazette*.

We have several times had occasion to allude, says MM. Charcot and Joffroy, to special forms of arthropathy, which manifest themselves quite frequently in the course of progressive locomotor ataxy, and one of us is compelled to allow weight to the arguments adduced in favor of referring the development of the articular affection in question to the influence of the spinal marrow. But, hitherto this hypothesis has received no support from facts in the domain of pathological anatomy; and for this reason it has appeared to us worth while to call attention to a case which may perhaps contribute to fill up the hiatus we have indicated.

[We insert here certain remarks which M. Charcot gives in a foot-note.—Ed. Quite recently, in reviewing the work of Ball, M. R. Volkmann has expressed the opinion that the arthropathy of the ataxies results simply from the distortion undergone by the ligaments and articular capsules, in consequence of the awkward carriage of those subject to the disease under consideration. The cases, now numerous, in which the articular affection is seated in the superior extremities, occupying the shoulder or the elbow, suffice to show that M. Volkmann's interpretation is susceptible of no more than a limited application. Further, the influence of a purely mechanical cause cannot be invoked, as the chief agency at all events, even in the cases where the arthropathy is in the inferior extremities. As I have taken occasion to point out, on the basis of clinical observation, the articular affection is most often developed at a comparatively early stage of the locomotor ataxy, and whilst as yet the motor accommodation is but slightly or not at all impaired.]

The clinical history of this case having been related in the second volume of the *Archives*, and in a memoir published by Dr. Ball, we dispense with the details of that history at the present time. We will, however, mention that the subject was a woman who had been affected with locomotor ataxy for ten years and had been confined to her bed about four years, when, without the intervention of any traumatic cause whatever, she was seized suddenly with an enormous but perfectly indolent

swelling of the left shoulder. The superior extremities had been the seat of only occasional darting pains, and of very slight motor incoordination, at the period when the arthropathy was developed. The latter had, besides, presented the group of symptoms, as well as the mode of evolution, of which one of us has traced the distinctive characteristics. It should also be noted that in spite of the intensity of the articular lesion, the movements of the shoulder, though impeded, never were entirely abolished.

Three months after the outbreak of the arthropathy, an obstinate diarrhoea set in, which, at the end of a few days, brought about a fatal termination. An autopsy was made. For the remarkable alterations presented by the different parts of the diseased joint, we must refer to the description given of it in Dr. Ball's memoir. It suffices to say here, that the lesions bore principally on the bony extremities. Thus, the head of the humerus and a portion of its anatomical neck had disappeared, and been replaced by a slightly excavated surface, smooth and eburnated at certain points, eroded and rugous at others. It seemed, as has been elsewhere said, as if the parts had been, so to speak, used up, by the reciprocal friction of the articular surfaces.

It appeared to us particularly interesting to inquire if there were not in the spinal marrow some other alteration than the scleroma of the posterior columns, the ordinary lesion in locomotor ataxy. With this end in view, the spinal marrow was plunged in a solution of chromic acid, for the purpose of subjecting it, at a suitable time, to an attentive study. The opportune moment having arrived, numerous transverse sections were made in different places. These sections were first colored with carmine, then treated with absolute alcohol, and finally subjected to the action of turpentine; when they were examined with the microscope under various magnifying powers. Here are the results of the examination.

In all portions of the spinal marrow, the posterior columns presented the sclerotic fascicular alteration proper to progressive locomotor ataxy. In the lumbar and dorsal regions, as is the rule in such cases, almost the whole of the posterior columns was invaded by the alteration; whilst in the cervical region the lesion occupied only a quite restricted triangular space, situated in the antero-posterior median axis, and progressively diminishing upwards. The antero-lateral columns were everywhere healthy. The grey substance, with its cor-

nua and commissures, was in all points perfectly normal through its entire extent, except at the lower two-thirds of the cervical arch. In that region was observed a remarkable lesion confined exclusively to the anterior cornu of the left side. In all the sections made at the level of the two inferior thirds of the cervical arch the following appearances were met with. The anterior cornu of the right side, as well as the commissures and posterior cornua of both sides, presented, as in the other regions, all the characteristics of the normal state. On the other hand, the left anterior cornu was manifestly deformed and atrophied. It was, so to speak, contracted one-third in all points of its anterior diameter, while its transverse diameter had undergone a notable elongation. Beside this, it seemed to have been the seat of a change in shape, which had thrown it outwards and backwards, so that its internal angle was carried away from the anterior median sulcus. This was not all. A considerable number of the large nerve-cells were wanting in the axis of the left anterior cornu. It was the posterior external cellular group which appeared to have especially suffered; it being, at certain points, almost completely absent. The cells of the external anterior and internal anterior groups were, on the contrary, equal in number on the right side and on the left. It was not possible to determine precisely the character of the morbid process, which, in the left cornu, produced this change of configuration, and this disappearance of a certain number of nerve cells. We think ourselves in a position to affirm only that there were here neither foci of *granular disintegration* nor any very evident traces of fibrillar metamorphosis or of multiplication of the nerve nuclei.

Was there any relation whatever between this alteration in the grey substance and the lesion of the posterior fasciculi? It is at least probable that there was. It cannot be admitted, however, without reservation, that the morbid process of which these fasciculi were the seat was extended by regular approaches to the left anterior cornu. There was in fact no such propagation found. The grey degeneration of the posterior fasciculi occupied in the cervical region, as has been already remarked, only a very limited space, in the neighborhood of the median sulcus; and the parts of those fasciculi which bordered on the grey commissure and on the posterior cornu appeared exempt from change.

The lesion which has been now described was found to be entirely limited to the an-

terior cornu of the left side, throughout the whole extent of the cervical arch. But, it progressively diminished toward the medulla oblongata, and also had ceased to exist at the upper part of the dorsal region.

To sum up—we see in this case an arthropathy of the left shoulder supervene, without the occurrence of any discernible external cause, during the course of a well-marked locomotor ataxy. At the autopsy there is found, in addition to the fascicular scleroma of the posterior columns, a lesion seated in the cervical region, and in the left half of the grey substance: that is, to say, at a point of the spinal marrow which we may suppose to be the place of origin of the nerve tubes distributed to the affected joint. Most certainly such a conjunction of circumstances is not fortuitous. But, it may be asked if the alteration of the left anterior cornu—revealed by the necroscopic examination—was not a result of the functional inertness to which the corresponding limb had been condemned for several months? This hypothesis is not admissible: for, on the one hand, we know that in this patient the motion of the left shoulder, although much impeded, was never completely abolished; and, on the other hand, the lesion of the grey substance in this case differed essentially from that which follows upon the amputation of, or upon section of the nerves which supply, a limb. We are thus led to believe that the spinal lesion here was primary, and that perhaps it determined the development of the articular affection by a mechanism analogous to that which we have referred to in speaking of the trophic lesions of the muscles in progressive muscular atrophy, and in infantile paralysis. We are not, however, authorized to form a definite conclusion here, so long as it has not been established by repeated observation that the alteration of the anterior cornua of the grey substance is an invariable phenomenon in the arthropathy of ataxics.

Here ends the paper from the *Archives*. We subjoin the following clinical account of a similar case, which we find in St. George's Hospital Reports.

"Remarks on a Case of Locomotor Ataxy with Hydrarthrosis.—This case I was fortunately able to show to M. Charcot when he was in Leeds. Mrs. F. had been long under me with the group of symptoms called locomotor ataxy very well marked. Some months ago she noticed her right knee beginning to swell; the swelling was quite painless. Her right knee now presents the form of joint-mischief noticed by Charcot, Ball, and others, to a prominent degree. I had intended to have published a woodcut of the knee; but it is so

exactly like the woodcut published by Ball, that I forbear.

In April, 1869, the right knee measured over the patella 15 inches, and 15½ inches about one inch above the patella. The knee-joint is evidently much distended by effusion into its cavity. The swelling is more marked on the inner side of the knee, and extends farther up the thigh than that on the outer aspect of the joint. There is also some slight swelling along the anterior edge of the tibia, just below the patella, and on either side of the ligamentum patellæ. On pressure over the patella some creaking is detected.

History.—There was no swelling of the knee until last April. For a time the patient thinks it varied in size; but "now it is always the same." There is no pain in it, and the woman does not feel her right knee to be any weaker than the left. The knee is never hot, and has not been so at any time since the swelling showed itself. The patient has not received any injury to the knee of which she is aware. She can extend the leg on the thigh perfectly well; but the distention of the synovial sac will not allow of the knee being completely flexed. The left knee and other joints are normal.

"I have to thank Mr. Bradley for kind assistance in taking measurements of the joint. The size of the knee has been remarkably reduced by pressure.
T. C. ALBUTT, M.D."

WELL-VENTILATED SCHOOL-HOUSES. *Mr. Editor.*—Many of your readers were interested in the description, by Dr. Derby, of a well-ventilated school-house in Salem. It is possible that the letter gives more credit, in connection with the subject, to Gen. Morin, than properly belongs to him. At any rate, the following facts may be of interest:—

1. In March, 1853, a resolution of the Legislature of Massachusetts directed the Board of Education to investigate the subject of ventilation, and it was done by Mr. Daniel Leach, the agent of the Board. You will find in the report of the Secretary of the Board of Education to the Legislature, in January, 1854, precisely the same plan for ventilation, and its application to school-houses, fully described, with diagrams.

2. The same thing was patented in England about three years after that date.

3. Mr. Leach, as Superintendent of Public Schools in the city of Providence, has since introduced the same plan of ventilation, and there are now in that city four school-houses, some of them in use for several years, and two more now building, with precisely the same plan of ventilation carried out in detail.

4. The city of Oswego, N. Y., has recently built a new school-house ventilated in the same way, and they are claiming the glory of the discovery there.

Yours, Y.

[In 1851 or 1852, Dr. Reid, of London, described to us the plan in question, as having been adopted by him in the successful ventilation of certain hospitals and palaces. Gen. Morin is, however, alluded to only as giving the weight of his advocacy in favor of this method of ventilation, not (*yet*) as its inventor.—Ed.]

Medical Miscellany.

MAL-TREATMENT OF LUNATICS. SOMETHING SAID ON THE OTHER SIDE.—The fact that two of the attendants of the Lancaster Lunatic Asylum have been convicted, and sentenced to seven years' penal servitude for maltreating a lunatic named Wilson, who died in consequence of the injuries they inflicted, will, it is to be hoped, prove a check upon the reckless abuse of force which many [?] recent cases prove to be too common in our lunatic asylums. The evidence on which the jury founded their verdict was, it is true, in part that of a lunatic patient, who deposed to having seen the deceased kicked on the chest and stomach by one of the prisoners, "who struck him with his knees, and jerked his right knee into different parts of his side." But the damning proof was given by the *post-mortem* examination, which showed fracture of six ribs on one side and of three on the other. The Medical officer of the Asylum, indeed, thought that the injuries might be accounted for by a fall on the frame of a crib on which, in a single-bedded room, the deceased slept. But it would be very difficult to suppose that such a fall would break ribs on both sides of the body. Moreover there was no evidence that any patient had ever before broken a bone in the manner suggested. Indeed, Dr. Russell, who had made the *post-mortem* examination and had seen 5000 cases in the Asylum, said he could not recollect a single case of a patient getting a broken bone in a single-bedded room. We apprehend that there can be no reasonable doubt that the jury returned a correct verdict, and that the sentence is a just one. We are glad that this case did not follow the same course as that of Nistri, in which it will be recollected similar injuries were inflicted, but by whom or how there was no satisfactory evidence. The only remedy for these occurrences is the better education and training for their business of lunatic attendants, and more vigilance on the part of Medical officers and superintendents of asylums.—*Medical Times and Gazette*.

BOSTON DISPENSARY.—The following are the statistics of this institution for the six months ending March 31st:—The number of new patients at the Central Office is 6,862, of which 4,790 are medical cases, and 2,072 surgical; the number in the Districts is 4,355, making an aggregate of 11,217.

The number of prescriptions put up at the Central Office during the six months is 11,217. Number of patients since October, 1796, is 387,519. Number of patients since July, 1856, when the Central Office was opened, 268,617. Number of prescriptions since July, 1856, 574,316. Number of cases of midwifery, attended by District physician during the six months, is 82.

SAMUEL A. GREEN, M.D., *Sup't.*

ACCORDING to the *Athenaeum*, there is no lecturer on Dentistry at either of the Medical colleges or schools in France; but M. Préterre and others are endeavoring to get the defect remedied.—*Medical Times and Gazette*.

ERRATA.—In our issue for March 31, page 226, 1st column, 3d line from bottom, and 2d column, 7th line from bottom, for "Merym" read *Meryon*. On same page, 2d column, 11th line from top, and 3d line from bottom, for "Jaccoud" read *Jacoud*. Page 241, 1st column, 54th line, for "has usually" read *have usually*.

TO CORRESPONDENTS.—Communications accepted:—Criminal Abortion—Aphasia—Letter from Lepaic—Simulated Pregnancy—Electricity in its relations to Practical Medicine; a Review—Remarks at a Meeting of the Councilors of the Massachusetts Medical Society—Surgical Lessons of the late War—Letter from Bonn—Ovariectomy—Climate of Madeira.

Dr. O.G.'s favor, with enclosure, received.

BOOKS AND PAMPHLETS RECEIVED.—The Preventive Obstacle, or Conjugal Onanism. The Dangers and Inconveniences to the Individual, to the Family, and to Society, of Frauds in the Accomplishment of the Generative Functions. By L. F. E. Bergeret. Translated by P. De Marton, M.D., New York.—Valedictory Address to the Graduating Class of Jefferson Medical College, at the 45th Annual Commencement, March 12th, 1870. By J. Aitken Meigs, M.D., Prof. of the Institutes of Medicine, &c. Philadelphia. Pp. 30.—Sanitary Legislation in New Orleans. By S. M. Dennis, M.D., Prof. of Theory and Practice of Medicine in the University of Louisiana. Pp. 34.—Seventeenth Annual Report of the Pennsylvania Training School for Feeble-minded Children. Media, Delaware Co. Pp. 20.—Report of the State of the New York Hospital and Bloomingdale Asylum, for the year 1869. Pp. 36.—Annual Report of the Board of Health, to the General Assembly of Louisiana, Dec. 31, 1869. Pp. 48.—Population: its Law of Increase. By Nathan Allen, M.D., Lowell, Mass. Read at the Meeting of the Western Social Association, in Chicago, November 12, 1868. Pp. 32.

Deaths in sixteen Cities and Towns of Massachusetts for the week ending April 2, 1870.

Cities and towns.	Number of deaths in each place.	PREVALENT DISEASES.		
		Consump- tion.	Pneumo- nia.	Scar. Fev.
Boston . . .	110	22	13	7
Charlestown .	9	0	1	0
Worcester . .	15	3	4	0
Lowell . . .	16	4	0	1
Milford . . .	6	1	0	0
Cambridge . .	13	3	1	0
Salem . . .	7	3	0	1
Lawrence . . .	6	1	0	1
Springfield .	11	1	1	1
Lynn . . .	10	1	3	0
Pittsfield . . .	5	1	0	1
Taunton . . .	4	2	0	0
Newburyport .	6	3	1	0
Somerville . .	2	1	0	0
Fall River . .	8	3	1	1
Haverhill . .	1	1	0	0
	228	60	28	14

GEORGE DERRY M.D.,
Secretary of State Board of Health.

DEATHS IN BOSTON for the week ending April 2d, 110. Males, 67—Females, 53.—Abscess, 1—accident, 1—apoplexy, 1—disease of the brain, 2—bronchitis, 6—cancer, 2—cholera infantum, 4—consumption, 22—convulsions, 1—croup, 3—debility, 4—diarrhea, 1—dropsy, 1—dropsy of the brain, 2—drowned, 1—erysipelas, 1—scarlet fever, 7—typhoid fever, 1—gangrene, 1—gastritis, 1—disease of the heart, 1—disease of the kidneys, 3—laryngitis, 1—disease of the liver, 1—congestion of the lungs, 4—inflammation of the lungs, 8—marasmus, 8—measles, 1—old age, 3—paralysis, 3—premature birth, 1—puerperal disease, 1—scrofula, 1—suicide, 1—teething, 1—unknown, 7—whooping cough, 1.

Under 5 years of age, 48—between 5 and 20 years, 11—between 20 and 40 years, 24—between 40 and 60 years, 8—above 60 years, 19. Born in the United States, 68—Ireland, 21—other places, 7.